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TM-(L)-715/016/01A

# TECHNICAL MEMORANDUM

(TM Series)

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Systems Division Program, for Space Systems Division, AFSC.

Utility Program Descriptions	SYSTEM
Milestone 11	DEVELOPMENT
Octal, Symbolic, Floating Point Decimal, or BCD Core Dump (CORE)	CORPORATION
By	2500 COLORADO AVE.
F. J. LaChapelle	SANTA MONICA
13 March 1963	CALIFORNIA
Approved	
J. B. Munson	

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CURRENT MODIFICATION

Modified Pages

1, 2

3

Notes and Filing Instructions

Remove pages 1 and 2 dated 15 December 1962  
Insert pages 1 and 2 dated 13 March 1963

Remove page 3 dated 15 December 1963  
Insert page 3 dated 13 March 1963

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#### SUBROUTINE IDENTIFICATION

- A. Title: Octal, Symbolic, Floating Point Decimal, or BCD Core Dump (CORE)  
Ident A10, Mod AC
- B. Programmed: 6 September 1960  
H. Grover, Lockheed Missiles and Space Division  
Additions and modifications made: 15 April 1962  
T. R. Henry, System Development Corporation
- C. Documented: 16 July 1962  
F. J. LaChapelle, System Development Corporation  
Additions and modifications made: 13 March 1963  
R. L. Kinkead, System Development Corporation

#### PURPOSE

To provide a fast octal, symbolic, floating decimal, or BCD dump routine for use dynamically or post mortem. To be called by a program as a sub-routine or entered from the console for post mortem operation.

#### USAGE

##### A. Calling Sequence

L     RTJ     CORE  
L+1   CU T   ALPHA  
       XY Z   BETA  
L+2   Normal Return

where:

C = Channel Number  
U = 1607 Cabinet Number  
T = Tape Number

on which the output will be listed (for direct output on printer  
CU T = 26 0 ).

X = 0/7 for - end of file following dump/no end of file following dump.

Y = 0/7 for - eject page before dumping/double space before dumping.

Z = 0/1/2/7 - octal dump/floating point decimal dump/BCD dump/symbolic dump.

ALPHA = Location to start dumping.

BETA = Location to terminate dump.

All registers are saved upon entrance and restored upon exit.

- B. To use from the console, word L+1 above is entered into the accumulator and control then transferred to the location of CORE+1.

When finished CORE will halt. If the start key is depressed, control is transferred to the master tape bootstrap.

- C. A console scoop is given with every dump.

- D. A line printed as \*\*\*\*\* word \*\*\*\*\* is to mean that all the cells after the preceding line and before the succeeding line in core contain the same word. More than eight successive words which are equal are printed in this manner.

#### RESTRICTIONS

- A. CORE uses the TTTT table.
- B. CORE cannot be called by a function card.
- C. If the tape designation is illegal, an exit will be performed immediately.
- D. CORE uses OUTPUT, which is obtained via the ADDRPF feature in MTCII, if a floating point decimal or a BCD dump is specified.

- E. If dump is BCD onto tape and is printed by IBMTP, some disturbance of format may occur since some BCD characters have special meaning to IBMTP. Compare BCD dump in Appendix A, page 35 (printed from tape using IBMTP) and BCD dump in Appendix B printed directly.

#### TIMING

One minute to dump "32K" core.

#### STORAGE REQUIREMENTS

771<sub>8</sub> cells are used in all.

520<sub>8</sub> are instruction cells.

105<sub>8</sub> are a table of the symbolic op codes.

The remaining cells used by CORE are buffers, headings, constants, and temporary storage.

#### VALIDATION TESTS

- A. CORETEST was written to test CORE. It dumps portions of core which contain all the op codes, floating point decimal words, and BCD words.

In addition it tests for eject and double space, end of file and no end of file, symbolic, octal, floating point decimal, and BCD dumps, and suppression of like words.

- B. Writing on different tape units is not tested for.

See Appendix A for a listing of the validation test program and a sample of its outputs.

#### REFERENCES

- A. "1604 Systems Manual," Lockheed Missiles and Space Division, LMSD - 447578, 6 September 1960, p. 50.01.01.
- B. Computer Program Library Catalog No. 75010.

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WILSON, G. D.

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24093  
24097  
SUNNYVALE  
22116A  
24124

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WINTER, J. F.  
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System Development Corporation,  
Santa Monica, California  
UTILITY PROGRAM DESCRIPTIONS  
MILESTONE 11 OCTAL, SYMBOLIC,  
FLOATING POINT DECIMAL, OR BCD CORE  
DUMP (CORE).  
Scientific rept., TM(L)-715/016/01A,  
by F. J. LaChapelle. 13 March 1963, 3p.  
(Contract AF 19(628)-1648, Space Systems  
Division Program, Space Systems Division,  
AFSC)

Unclassified report

DESCRIPTORS: Programming (Computers).  
Satellite Networks.

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Presents changes to "Utility Program  
Descriptions Milestone 11 Octal,  
Symbolic, Floating Point Decimal, or  
BCD CORE Dump (CORE)" TM(L)-715/016/01,  
dated 15 December 1962, by F. J.  
LaChapelle.

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